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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,337	12/31/2003	Ga-Lane Chen		8222

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WEI TE CHUNG
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EXAMINER

MAPLES, JOHN S

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/749,337	Applicant(s) CHEN ET AL.	
	Examiner John S. Maples	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 ~~is~~ are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-16 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for one lithium ion at each of the three vertexes of the equilateral triangle, does not reasonably provide enablement for three lithium ions at each of the three vertexes (claims 1 and 12). The specification is also enabling for one carbon atom at each of the six vertexes of the equilateral hexagon, does not reasonably provide enablement for six carbon atoms at each of the six vertexes (claim 9). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The specification provides only support for one lithium or carbon at each of the vertexes and not for a plurality of either the lithium or the carbon at a vertex of either the triangle or the hexagon.

Claims 2-8, 10-11 and 13-16, dependent on claims 1, 9 and 12, respectively, fall therewith

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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It is unclear to what term(s) the word "thickness" found in line 1 of claim 6 makes reference to?

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-13, 15, 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Blain et al.-US 2004/0076810. (Blain)

Reference is made to paragraphs 33, 63 and claim 6 along with all of the drawing figures of Blain for between 2 and 20 graphite sheets joined by adhesive. These portions of Blain set forth graphite sheets having a thickness of 72 microns, which thickness falls in the claimed range. It is inherent in Blain for the teachings of the structure of the carbon and the lithium forming the equilateral triangles and hexagons because the same is the basic structure for graphite. The distances within the triangles and the hexagons as claimed are also inherent in the graphite structure.

6. Claims 1, 4-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Greinke et al.-US 2003/0118826. (Greinke)

See paragraphs 43, 48-49 and all of the drawing figures of Greinke for a plurality of graphite sheets joined by adhesive. These portions of Greinke set forth graphite

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sheets having a thickness of 75 microns, which thickness falls in the claimed range.

Paragraph 43 recites the silicon carbide. It is inherent in Greinke for the teachings of the structure of the carbon and the lithium forming the equilateral triangles and hexagons because the same is the basic structure for graphite. The distances within the triangles and the hexagons as claimed are also inherent in the graphite structure.

7. Claims 1, 4-13, 15, 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Norley et al.-US 2003/0044614. (Norley)

Reference is made to the Abstract to Norley along with paragraphs 34, 41, 48 and claim 3. These portions of Norley set forth a plurality of graphite sheets joined by adhesive. These portions of Norley set forth graphite sheets having a thickness of 75 microns, which thickness falls in the claimed range. It is inherent in Norley for the teachings of the structure of the carbon and the lithium forming the equilateral triangles and hexagons because the same is the basic structure for graphite. The distances within the triangles and the hexagons as claimed are also inherent in the graphite structure.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions

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covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Greinke or Norley.

The only claimed feature not taught by either Greinke or Norley are the number of composite layers of graphite. It would have been obvious to one of ordinary skill in this art at the time the invention was made to have utilized 10 layers of graphite in either Greinke or Norley so that proper thermal management could be realized for a particular application. Such would provide for enhanced protection or admittance of heat in a chosen environment.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Maples whose telephone number is 571-272-1287. The examiner can normally be reached on Monday-Thursday, 6:15-3:45, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSM/4-2-2007


JOHN S. MAPLES
PRIMARY EXAMINER